1	A	No, sir.
2	Q	To your knowledge, did he tell anyone at the station
3	that h	e was the house?
4	A	No, sir.
5	Q	Did Mrs. Smith tell you what he did?
6	A	She told me he had been there.
7	Q	Did, did she tell you what he did?
8	A	That he talked.
9	Q	That he talked to her.
10	A	Yes.
11	Q	He did nothing else.
12	A	No, sir.
13	Q	Mr. Stewart, it was also your testimony that in when
14	you fi	rst saw that letter from Mrs. Raines in October dated
15	Octobe	r 21, 1988 we referred to it earlier that that was
16	the fi	rst inkling that you had concerning the rule concerning
17	FM bla	nketing, is that correct?
18	A	Yes.
19	Q	And I believe it was your testimony that when you
20	receiv	ed that letter you didn't have rule book handy, an FCC
21	rule b	ook.
22	A	Yes.
23	Q	You subsequently ordered the rule book.
24	A	Yes.
25	Q	Is it your testimony that when you received that

1	letter,	you did not consult with your consulting engineer
2	concern	ning the rule about FM blanketing?
3	A	That is correct, yes.
4	Q	And you didn't you did not consult with your com-
5	municat	cions counsel, namely me, concerning the rule about FM
6	blanket	ing?
7	A	Yes.
8		MR. SHOOK: Your Honor, I, I, I have a problem with
9	that.	On his direct testimony, he said explicitly he had a
10	3-hour	conversation with
11		JUDGE STIRMER: Well, Mr. Shook, you the record will
12	speak f	for itself.
13		MR. SHOOK: Fine, Your Honor.
14		JUDGE STIRMER: If the witness contradicts himself,
15	then he	does so.
16		BY MR. DUNNE:
17	Q	Do you remember the
18	A	I talked to Kevin Fisher about it, yes.
19	Q	Okay, you talked to Kevin Fisher about the rule?
20	A	About the FM blanketing.
21	Q	Okay, when you did you discuss with Mr. Fisher your
22	obligat	ions under the rule to complainants about FM blanket-
23	ing?	
24	A	Yes.
25	Q	Okay, do you recall what he told you?

1	A	He said that they had to be fixed.
2	Q	They had to be fixed.
3	A	Yes.
4	Q	Okay, but when he said they had to be fixed, did he
5	identi	fy what needed to be fixed?
6	A	No, sir.
7	Q	Did he tell you what signals needed to be fixed?
8	A	No, sir.
9		JUDGE STIRMER: Did you ask him?
10		WITNESS: No, sir.
11	}	JUDGE STIRMER: Well, how did you know what to do?
12		WITNESS: I didn't.
13		JUDGE STIRMER: Well, didn't you want to learn what you
14	had to	do?
15		WITNESS: I was trying.
16		JUDGE STIRMER: But you didn't ask.
17		WITNESS: No.
18		BY MR. DUNNE:
19	Q	I'm going to refer you, you to your testimony on
20	paragr	aph 12, page 8, Mr. Stewart. I'll point it out to you.
21	<b>A</b>	Um-hum.
22	Q	Now, I'm going to refer you to the line that reads
23	"altho	ugh," and I want you to read that to yourself down to
24	where	it says "Grade B contour." Can you read that to your-
25	self?	Have you read that, Mr. Stewart?

1	A	Yes.
2	Q	Okay, reading that, Mr. Stewart, does that refresh your
3	recolle	ection concerning what Mr. Fisher may, may or may not
4	have to	old you in November of 1988?
5	A	That we needed to fix the FM blanketing.
6	Q	Okay, but did Mr., did Mr. Fisher tell you anything
7	about t	the signals that you needed to fix?
8	A	That we, that we did not have to worry about Channel 6.
9	Q	Okay, did he say that you needed to fix any other
10	signals	besides Channel 6?
11	A	That we needed to take the FM blanketing out of the
12	other o	channels, which was 12, 15, and 8.
13	Q	Okay. Mr. Stewart, you were, you were actually working
14	at the	station in October of 1988, is that correct? I mean,
15	you wei	re in and out of the station.
16	A	I was not working there. I did not have an office
17	there.	Mr I did not have charge of the station, no.
18	Q	Were you there did you visit the station on a fairly
19	regular	basis, Mr. Stewart?
20	A	Yes.
21	Q	Okay, on, on roughly how often did you visit the
22	station	1?
23	A	Maybe an hour a day.
24	Q	Okay, so you were there almost every day in one form or
25	another	··

1 A Yes. 2 Q In October of 1988 there has been testimony that to 3 were various complaints called in after the station went of 4 the air. 5 A That's true. 6 Q And we heard your testimony that you heard nothing 7 about those complaints, you didn't learn about those complaints? 9 A Only hear I did hear that there was being com-	
were various complaints called in after the station went of the air.  A That's true.  Q And we heard your testimony that you heard nothing about those complaints, you didn't learn about those complaints?	
the air.  A That's true.  Q And we heard your testimony that you heard nothing about those complaints, you didn't learn about those complaints?	on .
A That's true.  Q And we heard your testimony that you heard nothing about those complaints, you didn't learn about those com- plaints?	
Q And we heard your testimony that you heard nothing about those complaints, you didn't learn about those complaints?	
7 about those complaints, you didn't learn about those com- 8 plaints?	
8 plaints?	
9 A Only hear I did hear that there was being com-	
	l
10 plaints.	
Q Okay, so let me make, make this clear for the record	d.
12 In October of 1988, when you were visiting the station, yo	u
did hear that there were complaints being called in about	кокѕ
14 interference?	
15 A But I yes. Yes.	
JUDGE STIRMER: Well, let can I interrupt you a	
17 minute, Mr. Dunne? If you say you were going to the stati	on
18 about an hour a day during October of '88, what were you d	oing
during the balance of the day? Did you have another job?	
20 WITNESS: Yes. I mowed the yard and I	
JUDGE STIRMER: Every day you mowed the yard?	
WITNESS: No. No, sir, not every day, but we had o	ther
businesses at that time.	
JUDGE STIRMER: What, what businesses?	
WITNESS: Mainly in the, in the fall of '88, I went	to

1	the farm. I shelled all the corn that was there. I threshed
2	all the soy beans that was there. I spent 90 percent of my
3	time at the farm away from the station.
4	JUDGE STIRMER: When did you sell the farm?
5	WITNESS: I did not
6	JUDGE STIRMER: Didn't you sell the farm before you
7	WITNESS: I was helping my son. I received no pay for
8	this. I was helping my son gather the crop.
9	JUDGE STIRMER: Is this the chicken-laying farm that
10	you had referenced to earlier in your testimony?
11	WITNESS: Yes, sir. Yes, sir.
12	JUDGE STIRMER: And it also grew corn and soy beans?
13	WITNESS: Yes, sir.
14	JUDGE STIRMER: You said you sold that, did you not?
15	WITNESS: I had sold it in
16	JUDGE STIRMER: What year?
17	WITNESS: In '86.
18	JUDGE STIRMER: But and then in '88 you were still
19	back there doing work at the farm that you had sold?
20	WITNESS: He was my son.
21	JUDGE STIRMER: You sold it to your son?
22	WITNESS: Yes. I worked entirely in the fall of '88 at
23	the farm. I dusted the ground; I gathered the shelled the
24	corn; I threshed the milo; and I gathered the beans. I did
25	all the combine work on this farm in '88. I was not around

1	the sta	ation at this period of time, very little.
2		JUDGE STIRMER: All right. Okay, Mr. Dunne.
3		WITNESS: And that is the reason I don't know a whole
4	lot abo	out it.
5		BY MR. DUNNE:
6	Q	Okay. Mr. Stewart, you mentioned that you sold a farm
7	to your	son, you just told that to Your Honor.
8	A	Yes.
9	Q	Did there come a time in 1988 you also mentioned in
10	the tes	stimony on Tuesday that was kind of confused that you
11	had var	rious other assets in 1987 and 1988, is that correct,
12	persona	al assets?
13	A	Yes.
14	Q	And some of which, you testified, you were planning on
15	using t	to build the station? I'm just refreshing your recol-
16	lection	1.
17	A	Yes.
18	Q	Is that correct?
19	A	Yes.
20	Q	Did there come a time after 1987, 1988, that you
21	your pe	ersonal value or your personal assets changed?
22	A	Yes.
23	Q	Can you tell the court when that occurred and what
24	happene	ed?
25	A	In the December of '88, my son came to and said that

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the farm and all that he had was closed, that the bank had came and took the trucks. 2 Is -- was this --3 0 It, it blows your mind. 4 Α Was this part of a legal proceeding? 5 6 Α Yes. I'm not trying to lead you, Mr. Stewart, but what kind 7 of legal proceeding was that? 8 A note. 9 Α What kind of legal proceeding was that? Were you in 10 Chapter 11, Mr. Stewart? 11 I, myself, was not in Chapter 11. The farm itself 12 entered into, but never did fully go through Chapter 11. 13 (Off the record.) 14 Ready? MR. DUNNE: 15 COURT REPORTER: Yes. 16 BY MR. DUNNE: 17 Okay, earlier Mr., Mr. Stewart, you testified that at 18 the time you purchased the filters for the station in response 19 to the question of Mr. Shook, the station had no assets. 20 That's --21 Α Is that correct? 22 23 Α -- right. That's --Did you under-That was your testimony at that time. 24 stand -- how did you understand "assets" when the question was

25

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1	put to	you?
2	A	As things of value.
3	Q	Okay, so you included in that, that definition property
4	and th	ings of value, like the station's equipment, that may,
5	may ha	ve constituted an asset?
6	A	The assets and the liabilities was equal.
7	Q	Well, no, that's, that's not the that wasn't the
8	questi	on, Mr. Stewart.
9	A	Okay.
10	Q	The question was: what did you think, consider,
11	assets	?
12	A	Real estate.
13	Q	Mr. Stewart
14	A	Equipment.
15	Q	Go ahead.
16	A	The equipment of the radio station.
17	Q	Okay. Mr. Stewart, I think you, you testified earlier
18	that y	ou were not aware during any of this time period of any
19	compla	ints to, to of interference to radios. Was that your
20	testime	ony?
21	A	Yes.
22	Q	Does that mean you were unaware of any efforts that
23	Mrs. S	tewart may have made in specific instances concerning
24	curing	of interference to radios?
25	A	Yes.

2 any	complaints about radios?
3 A	I discussed that
4 Q	If you were told.
5 A	Yes, she discussed with me about a radio.
6 Q	Okay, Mr. Stewart, the filters you testified that
7 you	purchased like 160 filters and then subsequently reordered
8 filt	ters for that, is that correct?
9 A	Yes.
10 Q	When you purchased 160 filters, I believe your testi-
11 mony	, that that was all the money you had and they required
12 payr	ment in advance, is that correct?
13 A	Yes.
14 Q	At the time you, you ordered the filters, were the
15 filt	ters an off-the-shelf item?
16 A	No, sir.
17 Q	They had to make the filters didn't they?
18 A	Yes.
19 Q	And it took them a time to, to send the filters to you?
20 A	Yes, sir.
21 Q	Were you under any sort of time constraints when you
22 orde	ered the filters, Mr. Stewart?
23 A	Yes, sir.
24 Q	And what time constraint that you understood at that
25 time	e?

1	A That this all had to be accomplished by February 20, 2
2	or something in that area.
3	Q And when you say "this," what do you mean by "this"?
4	A Of 1990.
5	Q Okay, when you say "this," what do you mean by "this"?
6	You said "this had to be accomplished." What had to be
7	A The visiting of this 105 homes to the best of our
8	ability to correct the situation that had that was being
9	caused by the FM blanketing.
10	Q Mr. Stewart, I want you to think very carefully about
11	this. It is your testimony that when you received Mass Media
12	Bureau Exhibit No. 25, an FCC letter of October 30, 1990,
13	dated October 30, 1990. It included a bunch of appendix,
14	Appendix A, Appendix B, Appendix C, et cetera. It talked
15	about what the station had to do concerning blanketing inter-
16	ference. You remember receiving this letter, correct?
17	A Yes.
18	Q Okay, and the letter required the station to do things
19	and they required the station
20	A Yes.
21	Q to do things within a certain amount of time, is
22	that correct?
23	A Yes.
24	Q Is your testimony that you did not consult with your
25	consulting engineer at the time? You did not consult with

1	Kevin Fisher, consulting engineer, at the time?
2	A Yes, I had consulted with him.
3	Q At this time when you received this letter, this
4	October 30, 1990 letter?
5	A (No audible response.)
6	Q Mr. Stewart, I'll if you're confused, I'll refer you
7	to it so you can look at it. Trying to that's not your
8	testimony. It's right here, and it's, it's the letter that's
9	got Appendix A, and Appendix B, and Appendix C with it and
10	it's the one that orders you to make the 105 visits?
11	A I conferred yes.
12	Q Okay, when you received that letter and you remember
13	receiving that letter?
14	A Yes.
15	Q Did you consult with, with your consulting engineer
16	concerning that letter? Did you talk with Kevin Fisher?
17	A No, sir.
18	Q You did not?
19	A No, sir.
20	Q Why not?
21	A Kevin Fisher
22	Q If you recall.
23	A could not lead us to filters that we needed, appar-
24	ently, and so I asked Charley Lampe if he could find something
25	that would work.

1	MR. DUNNE: Your indulgence one moment.
2	(Pause.)
3	MR. DUNNE: I have no further questions, Your Honor.
4	JUDGE STIRMER: Very well. Do you have wait a
5	minute, Mr. Stewart; just one moment. I know you're in a
6	hurry
7	WITNESS: No, I'm afraid I'm sorry.
8	JUDGE STIRMER: to get off the witness stand as most
9	witnesses are.
10	WITNESS: I'm sorry, sir.
11	JUDGE STIRMER: Do you have further cross
12	MR. SHOOK: Your Honor, this isn't in this isn't so
13	much any further questioning of Mr. Stewart as it is in the
14	nature of a request that documents be produced relative to the
15	situation.
16	MR. DUNNE: Your Honor, why don't we get the witness
17	out of the room?
18	JUDGE STIRMER: All right, you have no further exami-
19	nation of this witness?
20	MR. SHOOK: No, Your Honor.
21	JUDGE STIRMER: All right, Mr. Stewart, you're excused.
22	Thank you very much, sir.
23	MR. DUNNE: Your Honor, depending on maybe he
24	shouldn't be excused because, depending on what counsel is
25	going to ask for, I may have to ask some more questions on

1	redirect.
2	JUDGE STIRMER: Well, I'll excuse him at this point
3	subject to being recalled.
4	MR. DUNNE: Okay.
5	JUDGE STIRMER: Thank you very much, Mr. Stewart.
6	WITNESS: Thank you, sir.
7	JUDGE STIRMER: All right, would Mr. Ramage do you
8	want to confer with counsel for a moment?
9	MR. SHOOK: Your Honor, I want to make this request on
10	the record when Mr. Dunne comes back.
11	JUDGE STIRMER: Off the record.
12	(Whereupon, a brief recess was taken.)
13	JUDGE STIRMER: Very well, Mr. Shook.
14	MR. SHOOK: Your Honor, it's the Bureau's opinion that
15	the, the record concerning the early financial history of the
16	Stewarts and Calvary is hopelessly confused at this point from
17	the testimony, and the Bureau would request that documents be
18	produced and put into the record relative to the situation
19	that Mr. Stewart has testified to about the sale of the farm
20	and whatever happened subsequently up until the end of 1988,
21	when apparently, according to Mr. Stewart, that situation was
22	resolved.
23	JUDGE STIRMER: Well, I don't know what documents you
24	have in mind
25	MR. DUNNE: Well, Your Honor, let, let me say at I

|wish I could say that the record would be clarified if we were 2 to submit documents or take other testimony. My understanding 3 is, and I'm not Mr. Stewart's personal lawyer and I don't know a great deal about it, is -- what I was trying to get from him 4 5 on the witness stand is from 1986 through 1988, he basically 6 lost millions of dollars in assets through personal -- he 7 eventually went into personal bankruptcy. I believe he was 8 personally bankrupt. 9 JUDGE STIRMER: Well, he didn't say that. 10 MR. DUNNE: He didn't say that but, you know, that 11 was -- that's my understanding. 12 JUDGE STIRMER: Well --13 MR. DUNNE: And the -- you know, basically he lost the 14 farm; the son had the farm with -- you know, the son lost the 15 There were all sorts of assets that eventually got 16 retaken by banks and whatever, and this occurred over a 3-year 17 period. It culminated in 1988. And I quess my -- one is -- I 18 don't know if it would be, you know, clarifying a great deal. 19 It would put all sorts of -- as I understand, the assets 20 included a, you know, farm, some, you know, nursing homes in 21 Illinois --22 JUDGE STIRMER: What --23 MR. DUNNE: -- and, and Kentucky, and all sorts of 24 things. 25 JUDGE STIRMER: What documents do you want?

1	MR. DUNNE: And the other thing, Your Honor, is why?
2	Why why is it why do we need this?
3	MR. SHOOK: Your Honor, we have had testimony that is
4	all over the lot in terms of what the financial situation of
5	the licensee was from the time the licensee filed its con-
6	struction permit application up until the point of the
7	Lampe/Mrs. Stewart visits. We've had testimony to the effect
8	that thousands of dollars were coming in per month; we've had
9	testimony that the man had, I think it was I put it I
10	think he put it in terms of more than \$1,000,000 of assets
11	JUDGE STIRMER: But, Mr. Shook, what do you want me to
12	do? I don't understand what you want me to do. What docu-
13	ments do you want me to require them to produce? Do you have
14	anything specifically in mind? You just can't ask for docu-
15	ments without identifying what you want.
16	MR. DUNNE: You know, the other problem, Your Honor,
17	is, you know, regardless of what Mr. Stewart's personal worth
18	was, this is a corporate licensee and there's nothing in the
19	law or anything else that says Mr. Stewart has got to put his
20	entire personal fortune at
21	JUDGE STIRMER: All right, let me ask you this
22	MR. DUNNE: you know, the of the Calvary
23	Educational Broadcasting.
24	JUDGE STIRMER: Does Calvary Educational Broadcasting
25	Corporation have balance sheets for the years '88, '89, '90,

1	and '91?
2	MR. DUNNE: Your Honor, I don't know that. May I
3	consult with my client for a moment briefly?
4	JUDGE STIRMER: Certainly. Would that satisfy you,
5	Mr. Shook?
6	MR. SHOOK: That would, Your Honor.
7	JUDGE STIRMER: Balance sheets and financial state-
8	ments. Off the record.
9	(Whereupon, a brief recess was taken.)
10	MR. DUNNE: I'm sorry for the time I took, Your Honor,
11	for that consultation. Your Honor, I've been informed by
12	Mrs. Stewart that year-end balance sheets are available for
13	'88, '89, '90, and '91, and that informational tax returns
14	that were submitted to the IRS for Calvary Educational
15	Broadcasting are also available for the years '88, '89, '90,
16	and '91. Obviously, '92 hasn't been put together yet.
17	JUDGE STIRMER: Can you make copies of those available
18	to the Bureau?
19	MR. DUNNE: I'll make copies available of those to
20	Mr
21	JUDGE STIRMER: Very well. Thank you.
22	MR. SHOOK: Thank you, Your Honor.
23	JUDGE STIRMER: All right, Mr. Dunne, Mr. Ramage has
24	resumed the witness stand, and when we recessed yesterday
25	afternoon, you were conducting cross-examination.

1	MR. DUNNE: Okay.
2	JUDGE STIRMER: Would you continue, please?
3	MR. DUNNE: Your Honor, may I have just a moment to
4	check things here.
5	JUDGE STIRMER: Why don't we take a 5-minute recess at
6	this time? Would, would it be convenient?
7	MR. DUNNE: Yes, that's fine, Your Honor
8	JUDGE STIRMER: All right, we'll take our mid-morning
9	break at this time.
10	(Whereupon, a brief recess was taken.)
11	CROSS EXAMINATION
12	BY MR. DUNNE:
13	Q Good morning, Mr. Ramage.
14	A Good morning.
15	Q Once again, I want to emphasize to you that our job
16	here is to get, you know, accurate facts on the record, and if
17	you don't understand my question or hear my question, or if my
18	question isn't artfully put and it confuses you, please let us
19	know and we'll do what we can to correct the, correct the
20	issue. Okay, now, Mr. Ramage, yesterday just going back to
21	a couple of things we talked about yesterday. I believe you
22	testified that the measurements that are noted in Attachment A
23	of your report concerning field strength measurements were
24	taken close to the KOKS transmitter site, is that correct?
25	A That's correct.

- Q And if you can refresh our recollection, how close to the KOKS transmitter sites were they?
  - A Within approximately 100 yards.
- Q Okay, and I, I believe you characterized the terrain --
- 5 why don't you -- can you characterize the terrain in that
- 6 | area?

3

- 7 A It was a fairly low area near the transmitter site.
- 8 The transmitter is located in kind of a valley.
- 9 Q Okay. Okay, aren't, aren't towers generally put on the
- 10 higher parts of terrain to take advantage of -- especially
- 11 FM -- sites?
- 12 A That's, that's the optimistic -- optimum area is to be
- 13 as high as possible to have better coverage area, yes.
- 14 Q But this particular site, in your, in your -- to the
- 15 best of your knowledge, was low.
- 16 A Yes.
- 17 Q Okay, and the fact that it was low would result in
- 18 higher or lower signal strength measurements at that particu-
- 19 | lar site?
- 20 A At that particular site I don't know if that would make
- 21 any difference since I was about equal with the base of the
- 22 tower.
- Q Okay, and if you would refresh our recollection, you
- 24 took no other measures -- measurements anywhere else in the
- 25 | area, did you?

1	A	I did toward the end of the week, trying I was
2	reques	ted to do some field strength measurements, trying to
3	determ	ine if there was a pattern since this is a directional
4	FM sta	tion. I believe let me see if it's part of this
5	report	here. The report I submitted to our Mass Media
6	Bureau	included that. I do not know if this one here I do
7	not	yes, it does, page 65.
8	Q	Right. Okay, and these attached these measurements
9	were ta	aken when, Mr. Ramage?
10	A	On the 14th of February.
11	Q	Okay, was that the last day of your visit?
12	A	Yes.
13	Q	Okay, and these, these points were scattered over an
14	area ro	oughly how far from the KOKS transmitter site, if you
15	recalla	
16	A	They were approximately 1 mile each.
17	Q	Just looking at those measurements, Mr. Ramage, there's
18	a subst	antial difference, it seems, between some of the points
19	noted a	and some of the other points.
20	A	Yes.
21	Q	Do you have any, any explanation for that difference?
22	A	Again, a lot of times in, in my experience, it depends
23	on the	height of the terrain. Mainly, in this case, it's
24	going t	o be the height of the terrain. Was I in a valley at 1
25	mile as	opposed to being on top of a hill at 1 mile? Did, did

|I have direct line of sight to the tower or was it hidden or obstructed by trees or any other objects? And that tends to 2 change how much field strength you measure at that distance. 3 Okay, isn't, isn't it also a point, Mr. Ramage, if you 4 Q took KOKS as a directional antenna it might also affect the --5 6 your measurements? Α Correct. 8 Okay, so I'm looking at point 6 and 7, that is likely 9 to be in the null of the antenna, is that correct? 10 Α I -- it's very possible, yes. I'd have to look at 11 the -- look at where the -- were. And if you're located in the, in the null of the 12 13 antenna -- well, let's, let's --14 Yes, that would be approximately where the null --15 Okay, and if -- could you describer for the record and 16 for us non-technical types, what a null antenna is and how an 17 antenna creates a null. 18 In the case of an FM antenna, it had been -- it, it's Α 19 not a perfectly symmetrical same field strength at 1 mile 20 around the tower. Usually the antennas are mounted on the 21 side of a tower versus being, being perfectly round. 22 of that, you have areas typically behind -- 180 degrees from 23 where the antenna is mounted tends to be a null. You may have 24 other patterns that can radiate out that can create additional 25 nulls that may not be as sharp, and you will also have areas

that have more signal strength. It's not going to be a per-1 2 fect circle, in other words. It may fluctuate and have more 3 than null to a pattern. Okay, in, in real life, Mr. Ramage, as opposed to those nice lines that engineers draw on applications, isn't it more 5 6 accurate to, to characterize the actual signal of a, of a station more like a splash than a -- with, you know, varia-8 tions from point to point on a perfect circle? 9 Α Yes. 10 And especially with a direction antenna, that there 11 will be a great deal more energy going out in one direction than they would in another, is that correct? 12 13 Α It depends on the pattern and, and how much directivity 14 It may not be a great difference, but there will be a 15 difference. 16 Okay, did you happen to look up the, the pattern KOKS fired at your inspection? 17 18 No, I did not. I --19 Would the measurements, the field strength measure-20 ments, that you took that are referenced on page 20 -- 65, 21 excuse me, would they lead you to believe that KOKS is highly 22 directional? 23 Not highly directional, but directional. 24 Now, a null on an antenna essentially means 25 that -- well, why don't you describe what a null antenna is?

1 |I don't think we've got that. A null is just an area where the signal strength tends 2 to drop off. I'm, I'm not an expert on patterns, patterns, 3 but a null area would have a substantially less signal strength than the main lobe of the antenna wherever the 5 antenna to point toward. 6 Okay. Now, is, is FM -- what experience have you had, 7 if any, Mr. Ramage, prior to 1992 with FM blanketing inter-8 ference? 9 With FM blanketing interference? 10 Α Um-hum. 11 Q This is the second case I've dealt with. A 12 Okay, and the first case was where? 13 Q 14 It's in Humboldt, Iowa. Okay, and when was that? 15 I believe it may have been '88, '89 --16 17 Okay. Q -- somewhere in that time frame. 18 And did that, that FM blanketing situation require a 19 site visit by you? 20 21 Α Yes. Is it a fact, Mr. Ramage, that the phenomenon that is 22

FM blanketing, is, is it dependent on the power of the signal

at that particular home, particular person's home?

23

24

25

Α

Yes.

So, in other words, looking at these measurements here, 1 2 the people who were close to point 8 would have more problem 3 than people who were close to point 7. Α Yes. 5 Now, one of things yesterday you testified to, 6 Mr. Ramage, and I want to return to it -- maybe we can get, 7 somehow, get to the answer. There's a great -- numerically 8 there seems to a, a great deal of difference between the signal strength at point 8 vis-à-vis the signal strength at 10 point 7 -- I mean, that's under an order of magnitude that 11 might be -- what? -- 30 times? Something rough -- roughly. 12 Α Approximately, yes. 13 Does someone on the ground, okay, that's actually encountering signal strengths of those differing magnitudes, 15 is that an accurate depiction of the, the sort of impact or 16 effect that they would receive? Do you understand the ques-17 tion? Let me, let me phrase it in another way. 18 A Okay. 19 Is the person in point 7 likely to receive a signal 20 that is on the magnitude of 30, you know, 30 points less than 21 the person at point 8? 22 Not necessarily. 23 And the reason -- and so there's no numerical, arith-24 metic relationship between the readings. 25 Α No.

1	Q Is there any relationship at all?
2	A Not that I can tell. I mean, in general, if you were
3	in less field intensity you should have less interference but
4	in, in talking with these points, at point 7 versus point 8,
5	there was a 30, 30 magnitude difference. A hundred feet off
6	of point 7, it may be a totally different reading.
7	Q Again, it depended upon terrain?
8	A Terrain; reflections from other objects. At 1 mile
9	that's basically the only things you're going to have.
10	Q Okay, is there any scale that you use, Mr. Ramage, to
11	kind of characterize field strengths at a particular, a par-
12	ticular site?
13	A I'm not sure of your question.
14	Q Well, for example, if you were to go to a site, is
15	it would it be your normal, your normal or normal busi-
16	ness to say a field strength of 1,500 microvolts per meter at
17	a particular site is a strong signal and 1,000 microvolts is a
18	weak signal?
19	A In FM, I normally do not measure the field strength
20	like that in radio stations.
21	Q Okay, but FM radio stations, actually there are
22	measurements of field strength is that correct?
23	A Yes.
24	Q Okay. For example, a city-grade contour for an FM
25	radio station is 60 millivolts per meter, that's right is